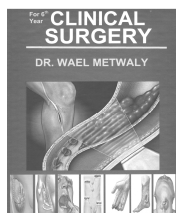


# REVISION 15

## ORTHOPAEDICS

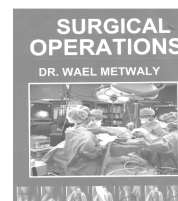
BY DR. WAEL METWALY

### ★ Clinical



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### ★ Operative



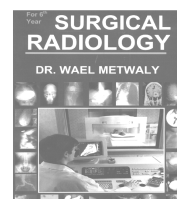
- Management of # Clavicle
- Management of # Neck Femur
- Management of # Shaft Femur

### ★ Jars



- T.B spine
- Osteoclastoma
- Osteosarcoma
- Parosteal sarcoma
- Chondrosarcoma

### ★ X-rays



#### ➤ Plain X-ray:

- # of upper limb
- # of lower limb
- # spine
- L.D.P
- Chronic Osteomyelitis
- Pott's disease
- Hyperparathyroidism
- Exostosis
- Osteoclastoma
- Osteosarcoma
- Chondrosarcoma
- Bone Metastasis


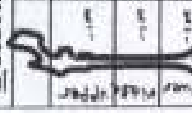
## Injuries of the upper limb

	# clavicle	Shoulder dislocation	# neck humerus	# shaft humerus	Supra-condylar #	# shaft radius & ulna	Colle's fracture
<b>commonest</b>	middle 1/3	Anterior	Old age		children		Old women's #
<b>C/P</b>	1- Loss of function; mother suckling her baby. 2- <u>Deformity</u> : medial end pulled upward & lateral end falls downward and medially.	1- Loss of function. 2- Swelling. 3- <u>Deformity</u> : abduction, change in length, flattening.	H E 1- Loss of function. 2- Swelling. 3- <u>Deformity</u> : abduction or adduction type (usually impacted)	L P S <u>Deformity</u> : - abduction type: # is above deltoid insertion or - adduction type: # is below deltoid insertion	D A T <u>Deformity</u> : extension type (99%) or flexion type (1%).	<u>Deformity</u> : - Above insertion of P.T.: proximal part is in supination. - Below insertion of P.T.: proximal part is in mid-pronation.	<u>Deformity</u> : Typical dinner fork deformity. - Distal part: upward, backward & laterally. - Proximal part: fully pronated & adducted.
<b>Complications:</b>	Mal-union	Recurrency	Circumflex nerve injury	Radial nerve injury	Local complications especially: - Myositis ossificans. - Volkman's contracture. - Cubitus varus or valgus		
<b>Treatment</b>	Broad arm to neck sling.	- Reduction. - Fixation: <u>arm to chest.</u>	- Abduction type: Fixation <u>arm to chest.</u> - Adduction type: triangular sling.	- Reduction. - Fixation: U-shaped plaster slab.	- Reduction. - Fixation: above elbow posterior slab. - After care: radial pulse.	- Undisplaced: above elbow cast. - displaced: external or internal fixation.	- Reduction. - Fixation: below elbow plaster cast. - After care: active mobilization of fingers

### Summary for treatment:

Sling	Arm to chest	Slab	Cast
* # clavicle.	* Anterior shoulder dislocation.	* # shaft humerus.	* # shaft radius & ulna.
* # neck humerus (adducted type)	* # neck humerus (abducted type)	* Supra-condylar # humerus.	* Colle's #.

## Injuries of the lower limb

	# pelvis	Posterior hip dislocation	# neck femur	# shaft femur	# shaft tibia & fibula
Types & Aetiology	<ul style="list-style-type: none"> <li>• Solitary #: - Avulsion #, isolated # of pelvic ring.</li> <li>• Disruption of p. ring: - Double break ant. (butter-fly), combined ant. &amp; posterior (open book).</li> </ul>	<ul style="list-style-type: none"> <li>• Congenital.</li> <li>• Traumatic: posterior (the commonest), anterior, central.</li> <li>• Pathological.</li> </ul>	<ul style="list-style-type: none"> <li>• Intra-capacular: 1) sub-capital, 2) trans-cervical, 3) basal neck</li> <li>• Extra-capacular: 4) per-trochanteric, 5) inter-trochanteric.</li> </ul> 	Direct or Indirect trauma	Direct or Indirect trauma
C/P	1- Loss of function: pt can't lift his leg. 2- Deformity: shortening & external rotation.	H E 1- Loss of function: painful & limited move. 2- Swelling. 3- Deformity: flexion, add & int. rotatn. [X-ray: head is outside acetabulum, interrupted Shenton's line.]	L P S D A T 1- Loss of function: no movement. 2- Swelling. 3- Deformity: abduction type 80% (usually impacted) or adduction type 20%.	Deformity:  Circulation of foot should be examined.	
Complications:	- Sciatic nerve injury. - Mal-union (indication for c/s in females)	GENERAL + - Sciatic nerve injury. - # posterior lip of acetabulum.	Local complications especially: - Sciatic nerve injury. - Non-union: (due to...) - Mal-union (coxa vera)	- Myositis ossificans. - popliteal vessels injury. - Volkman's on fracture. - Mal-union (shortening).	Cross union.
Treatment	* Correction of shock + tit of visceral injury. * # - stable & no displacement: rest + binder. - disruption of s. pupis: reduction + hip spica (6 w.) - upward displacement: skeletal traction on tibia. - double #: external fixator. * After care: movement on crutches.	- Reduction: flexion, abd. & ext. rotation. - Fixation: hip spica (6w.)	* Intra-capacular #: - if young: open reduction+ fixation (canulated screws) - if old: hemiarthroplasty or THR. * Extra-capacular #: - if fit: open reduction+ fixation (dynamic hip screws) - if unfit: traction on Bohler splint.	* immobilization + 4 anti (antishock, antitetanic, antigas, antibiotic). + - newborn: tongue depressor+ bandage to abdomen. - child <4y.: Bryant's method over gallow's splint. - child 5-15y.: skin traction on Thomas splint. - adult & old: open reduction+ fixation (intramedullary nail or plate & screws) & if failed: skeletal traction on Bohler's frame.	* Undisplaced #: above knee cast (6 w). * Displaced #: - reduction+ below knee cast. - open reduction+ fixation by plate & screws only on tibia.

# EXAMS

- A. Written Questions**
- B. Explanations**
- C. Cases**

## A. WRITTEN QUESTIONS

### GENERAL PRINCIPLES

**2002**

- Discuss complications of **Fractures** (12 Marks)

**2004**

- Discuss Methods of fixation of **Fractures** (20 Marks) دور ثانی

**2006**

- Mention the complications of **Fractures** (12 Marks)

**2007**

- give an account on complications of **Fractures** (10 Marks)

**2009**

- Mention Methods of fixation of **Fractures** (10 Marks) دور ثانی

### INJURIES OF UPPER LIMB

**2000**

- Discuss C/P & Complication of **Supra-condylar # of Humerus** (10 Marks)

**2001**

- Mention C/P & Complication of **Supra-condylar # of Humerus** (7 Marks) دور ثانی

**2002**

- Mention C/P & Complication of **Colle's Fracture** (10 Marks) دور ثانی

**2003**

- Discuss Complication of **Supra-condylar # of Humerus** (9 Marks) دور ثانی
- Discuss Complication of **Supra-condylar # of Humerus** (20 Marks)

**2005**

- Enumerate 4 complications 2ry to **Colle's fracture & Supra-condylar #** (4 Marks) دور ثانی

**2006**

- A 10-years- old boy presented with pain & swelling in the elbow region after car accident.  
**Discuss the management ?** (20 Marks)

**2007**

- Discuss C/P, & Management of **Supra-condylar # of Humerus** in a baby 6 years old (20 Marks) دور ثانی

**2008**

- Enumerate Specific complications 2ry to  
**Supra-condylar # Humerus & # Clavicle** (10 Marks) دور ثانی

**2009**

- Discuss mechanism, displacement, diagnosis & treatment of  
**Colle's Fracture** (10 Marks)

## **INJURIES OF LOWER LIMB & SPINE**

**2004**

- Discuss C/P , Complications & treatment of **Fracture Neck Femur** (25 Marks)

**2005**

- Enumerate 4 complications 2ry to  
**Fractures Pelvis , Neck & Shaft Femur** (6 Marks) دور ثانی

**2006**

- Discuss aetiology, C/P & Complications of **Fracture Spine** (20 Marks) دور ثانی

**2008**

- Enumerate Specific complications 2ry to  
**Fracture Pelvis & Fracture Shaft Femur** (10 Marks) دور ثانی

- Describe types & treatment of **Fracture Neck Femur** (10 Marks)

**2009**

- What are types, C/P, complications & management of **Fractures Pelvis** (10 Marks) دور ثانی

## **INFLAMMATIONS**

**2002**

- Discuss Pathology, complication & diagnosis of **Chronic Non-specific Osteomyelitis** (12 Marks) دور ثانی

**2003**

- Discuss complications of **Pott's Disease** (9 Marks)

**2005**

- A 5-year-old boy complains of pain at the lower end of thigh & inability to walk. Examination reveals a temp.39 & swelling with severe tenderness at lower end of thigh .  
**Discuss management** (20 Marks)

**2008**

- Describe C/P & DD of **Acute hematogenous Osteomyelitis** (10 Marks)

# NEOPLASMS

1997

- Discuss **Osteoclastoma** path & C/P

(10 Marks) دور ثانی

2002

- Discuss Pathology C/P of **Osteosarcoma**  
➤ Discuss **Metastatic disease** of Bone

(12 Marks)

(12 Marks)

2005

- Discuss Pathology, treatment of **Osteosarcoma**

(15 Marks) دور ثانی

2007

- Discuss Pathology & treatment of **Osteogenic sarcoma**  
➤ Discuss C/P & treatment of **Ivory Osteoma**

(10 Marks)

(10 Marks)

2008

- Discuss C/P & treatment of **Osteochondroma**

(5 Marks) دور ثانی

2009

- 15 years male presented with hard small swelling in the front of the Rt. thigh. X-ray revealed elevated periosteum with sun rays appearance affecting distal femur

Discuss the management ?

(10 Marks)

## B. EXPLAIN

### THE FOLLOWING STATEMENTS



#### 1. Displaced Intra-capsular # Neck Femur in elderly is usually treated by Hip Arthroplasty

(2005 – دور اول – Kasr)

- Because this # characterized by Non union due to :

- ① Avascular necrosis.
- ② Senility
- ③ Inadequate reduction

#### 3. Patient with Ewing's Sarcoma may be diagnosed as Osteomyelitis

(2005 – دور اول – Kasr)

- Because Ewing's sarcoma characterized by Fever similar to Osteomyelitis

#### 4. If pt. with a supra-condylar # should be kept over night for observation

(2006 – دور ثانی – Kasr)

- To avoid Volkmann's contracture which is massive infarction of the flexor compartment & So we must to observe the pulsation

#### 5. # Shaft Femur in adult is better treated by Internal Fixation.

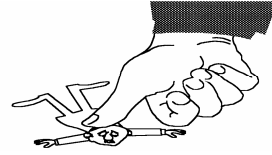
(2006 – دور ثانی – Kasr)

(2006 – دور اول – Kasr)

- Because # femur may be:

- ① Associated with soft tissue injury.
- ② Associated with soft tissue interposition.
- ③ Associated with dislocation
- ④ Pathological #
- ⑤ Unstable # or Multiple #

## C. CASES



### Case [88] [ Acute Osteomyelitis ]

A 5-year-old boy complains of pain at the lower end of thigh & inability to walk. Examination reveals a temp.39 & swelling with severe tenderness at lower end of thigh

(2005 – دور أول – Kasr)

- Discuss the Management?

### Case [89] [ Supra-condylar # ]

A 10-years- old boy presented with pain & swelling in the elbow region after car accident.

(2006 – دور أول – Kasr)

- Describe the expected findings on clinical examination?
- Mention investigations?
- What is the most important post-operative follow up?

### Case [90] [ Osteosarcoma ]

15 years male presented with hard small swelling in the front of the Rt. thigh. X-ray revealed elevated periosteum with sun rays appearance affecting distal femur

(2009 – دور أول – Kasr)

- What is the most likely diagnosis?
- How to confirm the diagnosis?
- Discuss the plane of diagnosis?

بسم الله  
GOOD LUCK

**Dr. WAEL**